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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,931	04/03/2001	Michael P. Mittmann	3381	2137

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AFFYMETRIX, INC  
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SANTA CLARA, CA 95051

EXAMINER

MARSCHER, ARDIN H

ART UNIT	PAPER NUMBER
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1631

DATE MAILED: 01/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Applicati n N .

09/824,931

Applicant(s)

MITTMANN ET AL.

Examiner

Ardin Marschel

Art Unit

1631

-- The MAILING DATE of this communication appears on the c ver sh t with the correspondence address --

**Period f r R ply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-51 is/are pending in the application.
- 4a) Of the above claim(s) 17-26 and 29-51 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 27 and 28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-51 are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. §§ 119 and 120**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) *(Paper 2)*
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

**DETAILED ACTION**

**ELECTION RESPONSE**

Applicant's election with traverse of Group I (claims 1-16, 27, and 28) in the Paper filed 10/6/03 is acknowledged. The traversal is on the ground(s) that the subject matter of Groups I and IV are so interrelated as to make a search of the two Groups not overly burdensome. This is not found persuasive because the specifically summarized distinctions were listed which differ between Groups I and IV in the previous office action, mailed 9/9/03. These have not been explained as to why they constitute distinct and unduly burdensome search differences in applicants' traversal argument. Therefore, the traversal argument is non-persuasive due to lacking factual support as well as not being directed to any specifics of the restriction requirement between Groups I and IV as set forth previously.

The requirement is still deemed proper and is therefore made FINAL.

**VAGUENESS AND INDEFINITENESS**

Claims 1-16, 27, and 28 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In the preamble of claim 1, the method is directed to polymer synthesis. In contrast, the actual claim steps (a) and (b) lack any requirement for polymer synthesis. Rather step (a) aligns reticles and step (b) couples monomers to locations on the substrate. A polymer is understood to be comprised of at least two monomers and therefore step (b) would need to be performed at least twice for a plurality of substrate

Art Unit: 1631

locations to synthesize polymers thereon. This is not required in the claim steps.

Therefore, it is unclear whether the preamble controls the metes and bounds of the claims or the actual claims steps since these claim elements differ significantly as to what is required for synthesis. Independent claims 9 and 27 also contain this unclear conflict. Clarification via clearer claim wording is requested. Claims which depend directly or indirectly from claims 1, 9, or 27 are also rejected hereinunder due to their dependence.

### **PRIOR ART**

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-16 are rejected under 35 U.S.C. 102(e)(1) as being clearly anticipated by Hess et al. (2002/0094533).

Hess et al. disclose the alignment of grids of patterns with through-holes therein which are therefore reticles which are reasonably grid patterns as instantly claimed as summarized in the abstract and the section entitled "SUMMARY OF THE INVENTION" in paragraphs 0010 – 0069. These grid reticles are also depicted clearly as being aligned for practice of the invention in Figures 3 – 7 with patterns as in the instant claims 2-4 etc. These grid patterns of reticles are a mask which controls the synthesis

Art Unit: 1631

of arrays of polymers on a substrate as set forth in paragraphs. These platens of through-holes are contiguously bonded as in paragraph 0012 which also discloses the translation of the reticles of approximately the same H and W as in instant claims 4, 5, etc. The light irradiation practice of instant claims 8 and 16 is disclosed in Hess et al. in paragraph 0021, in the sentence bridging pages 2 and 3. The arrays that are synthesizable via said platen grid include nucleic acid arrays as described in paragraph 0021 with nucleic acid monomer synthesis steps specifically described in paragraph 0210. This published application is prior art via its priority document 60/239,538 which is also supplied herewith.

If a copy of a provisional application listed on the bottom portion of the accompanying Notice of References Cited (PTO-892) form is not included with this Office action and the PTO-892 has been annotated to indicate that a copy was not readily available, it is because the copy could not be readily obtained when the Office action was mailed. Should applicant desire a copy of such a provisional application, applicant should promptly request the copy from the Office of Public Records (OPR) in accordance with 37 CFR 1.14(a)(1)(iv), paying the required fee under 37 CFR 1.19(b)(1). If a copy is ordered from OPR, the shortened statutory period for reply to this Office action will not be reset under MPEP § 710.06 unless applicant can demonstrate a substantial delay by the Office in fulfilling the order for the copy of the provisional application. Where the applicant has been notified on the PTO-892 that a copy of the provisional application is not readily available, the provision of MPEP § 707.05(a) that a copy of the cited reference will be automatically furnished without charge will not apply.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

Art Unit: 1631

the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1-16, 27, and 28 rejected under 35 U.S.C. 103(a) as being unpatentable over Hess et al. (2002/0094533) taken in view of In re Venner [262 F.2d 91, 95, 120 USPQ 193, 194 (CCPA 1958)].

The Hess et al. description of the basic invention has been summarized above, but does not include automation such as computerization as in claims 27 and 28 which are also reasonably deemed embodiments within instant claims 1-16 as options.

The legal decision of In re Venner indicates that motivation and suggestion is well known to automate a manual activity as in Hess et al.

Thus, it would have been obvious to someone of ordinary skill in the art at the time of the instant invention to practice the Hess et al. manual array synthesis methodology as automation with well known computerization as suggested and motivated as being obvious in view of In re Venner thus resulting in the computerization embodiments of the instant claims.

No claim is allowed.

Papers related to this application may be submitted to Technical Center 1600 by facsimile transmission. Papers should be faxed to Technical Center 1600 via the Central PTO Fax Center. The faxing of such papers must conform with the notices published in the Official Gazette, 1096 OG 30 (November 15, 1988), 1156 OG 61 (November 16, 1993), and 1157 OG 94 (December 28, 1993)(See 37 CFR § 1.6(d)). The Central PTO Fax Center number is (703) 872-9306.


Art Unit: 1631

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ardin Marschel, Ph.D., whose telephone number is (703)308-3894. The examiner can normally be reached on Monday-Friday from 8 A.M. to 4 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Woodward, Ph.D., can be reached on (703)308-4028.

Any inquiry of a general nature or relating to the status of this application should be directed to Legal Instrument Examiner, Tina Plunkett, whose telephone number is (703)305-3524 or to the Technical Center receptionist whose telephone number is (703) 308-0196.

December 27, 2003

  
ARDIN H. MARSCHEL  
PRIMARY EXAMINER